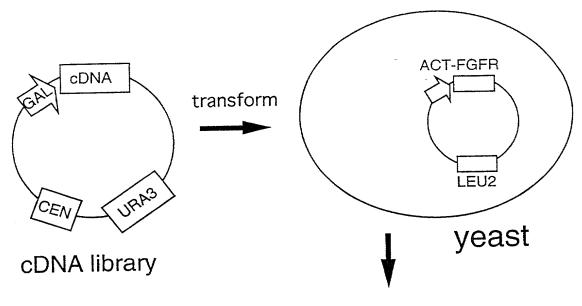
Title: Isolated FGF Receptor Inventors: Marc W. Kirschner



select URA+ LEU+ on glucose plates E: 150,000; X: 25.000 transformants

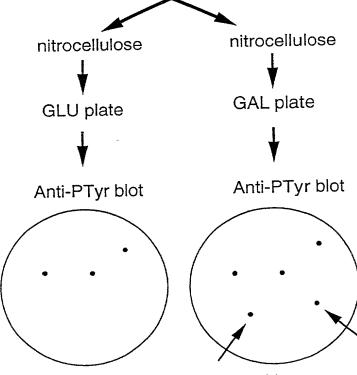


Figure 1A

Identify Gal specific positives

E: 65; X: 29 colonies

Title: I Inventors: I

Isolated FGF Receptor Marc W. Kirschner

Figure 1B

Gal specific positives

E: 65 colonies X: 29 colonies

Repeat of screen with aniti-PTyr

E: 9 colonies X: 2 colonies

Rescue plasmid DNA

Retransformation into a yeast strain not expressing FGFR

Is activation of P-Tyr by plasmid FGFR dependent?

FGFR dependent P-Tyr:

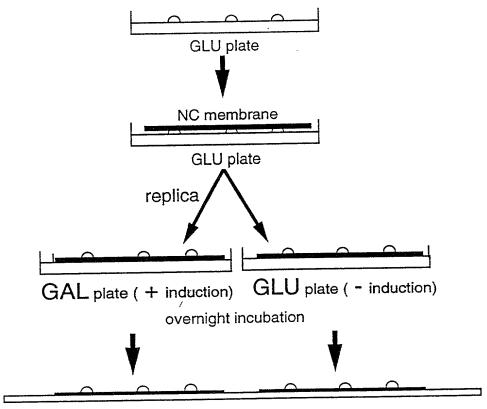
E: 8 genes, X: 2 genes

FGFR independent P-Tyr:

E: 1 gene, X: 0

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Inventors: Marc W. Kirschner



filter paper soaked in 0.1 % SDS , 0.2 N NaOH, 35 mM DTT 30 min

Figure 2

Title: Isolated FGF Receptor Inventors: Marc W. Kirschner

ALP CDNA ACCAAAAGAA CGACAGAACG AAGGAAAGAC AGAGACAGTC CTTGTTTTAA GACTCCAGGG 60 GAATTTACGT CTAATAAAGA GAAGAGAGC ATTGTATGCT TGACATTATG GTGGCAGTTT 120 TATCTTCTCT GTTGACAATT TGCATTATCC TCAGCTTTTC TCTCCCATCC GATACCCAGA 180 ATATCAATGC CTTTATGGAA AAGCACATTG TTAAGGAAGG AGCTGAAACA AACTGCAACC 240 AAACCATCAA AGACAGAAAC ATCCGGTTTA AAAACAACTG CAAATTCCGC AACACCTTTA 300 TTCATGATAC CAATGGTAAA AAGGTGAAGG AGATGTGCGC TGGGATTGTC AAATCTACCT 360 TTGTGATCAG CAAGGAACTG CTGCCTCTCA CTGACTGCTT GTTGATGGGA CGTACTGCAA 420 GACCCCCAAA TTGTGCTTAT AATCAAACAA GAACAACTGG GGTCATTAAT ATCACTTGTG 480 AAAACAATTA CCCTGTGCAC TTTGCTGGGT ACAAATCAAG CTTCTGTGCT TCATATTCTC 540 CATGTGCCTT AATAGTAATA ACTGTTTTCC TGCTCAGCCA GCTACTGCTC CCTGCTATGA 600 GATGATGCCC AGAAACGGGA GTATCAATAG CTAAAACTAG AAGGACTGAT AGTGATGGAT 660 GATTGTTCCT AAGTCATTTA GAGATCTACC TGTGTTCACT TCCAAACAAA GAAGACATAG 720 GTATAATTGA ATCAACCGTG ACATAGACTG ACTTCTAAAT AATAAAAGCA ACATTTTCTG 780 ТТТТААСААА ААААААААА АААААААА 809

Figure 3

Title:

Isolated FGF Receptor

Inventors: Marc W. Kirschner

ALP MLDIMVAVLSSLLTICIILSFSLPSDTQNINAFMEKHIV KEGAETNCNQTIKDRNIRFKNNCKFRNTFIHDTNGKKVK EMCAGIVKSTFVISKELLPLTDCLLMGRTARPPNCAYNQ TRTTGVINITCENNYPVHFAGYKSSFCASYSPCALIVIT VFLLSQLLLPAMR

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Isolated FGF Receptor

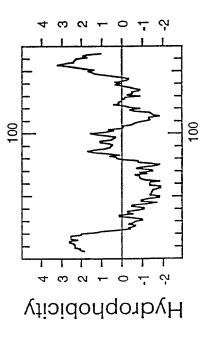
Title: Inventors:

Marc W. Kirschner

VQPSLGKESAAMK FERQHMDSTVATSSSPTYCNQMMKRRNMTQGQE MLDIMVAVLSSLLTICIILSFSLPSDTQNINAFMEKHIVKEGAETN----CNQTIKDRNIRFKNN AQDDYRYIHFLTQHYDAKPKGRNDE-YCFNMMKNRRTRP---

CKPVNTFVHESLAD-VHÅVCSQENVKCKNGKSNCYKSHSALHITBÇRLKGNAKYP-NCDY-ÕTSQH CKFRNTFIHDTNGKKVKEMCAGI-VKSTFVISKEL----LPLTDCLLMGRTARPPNCAYNQTRT-CKDRNTFIHG NKNDIKAICEDRN-GQPYRGDLRI-SKSEFQITICKHKGGSSRPP-CRYGATED-

Chinese Hamster pancreatic RNase (32.3%) bovine angiogenin (28.8%) Xenopus ALP TGVINITCENN--YPVHFAGYKSSFCASYSPCALIVITVFLLSQLLLPAMR SRVIVVGCENG--LPVHFDESFITRPH QKHIIVACEGNPFVPVHFDATV



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CLP cDNA ATTTACCACC GACCGTTACA CCTGGTTTTT GCTAAGGACA CATTCAATAC AAGAACTAAA 60 AGTGGGAAAC TGGGGCCTTT GCAGAAACA ATGCAGTTTT TAAGATTTCT TGCCATCCTT 120 ATTTTCTCTG CTAAACATTT TATCAAGCAT TGCAAAGGTG AAACTTGCAT GGGACTGAAC 180 TGTAATGACC CAAGGTTATT GGAGGCAATT AAGAGCAACA CAATCAATCA GCTCTTGCAT 240 GATACAATTA ATGCCACCCA TGGAAAGAGT CCACCAAAAT CCACTAAAAC CTTGCCCTTC 300 TTGGGTATCA CAGACAGTAA GAAATTGAAT AGAAAATGCT GTCAGAATGG AGGCACTTGT 360 TTCTTGGGGA CCTTTTGCAT CTGCCCTAAG CAATTTACTG GTCGGCACTG TGAACATGAA 420 AGGAGGCCAG CAAGCTGCTC CGGTGTTCCC CATGGAGACT GGATCCGTCA GGGCTGCTTG 480 CTGTGTAGAT GTGTGTCTGG TGTCCTACAC TGCTTCAAGC CCGAGTCTGA GGACTGTGAT 540 GTTGTGCATG AAAAAAACAT GAGATCGGGG GTCCCGAGAA TGCAGCTCAG CTTAATCATC 600 TATTGCTTCC TTACTGCAAA CTTGTTTTAC CACATAGTTT GGCATCTGAA TATTGGACTT 660 TAACAGAGTA ACTTGAGTCT GCCAGTCAGG TTCAGATTGC AGACGTCTGT GTCTACACTG 720 CACTTTCAAT TTGTGAACCC ATTTTGCCAG GATTATGCTT GAAGTATATG GCTATCTTCC 780 ACCCCTGGAA TCCTGGAAAA TATGCAGAAA CTATACAATG CCTTATTTCT ATTGGTTGTT 840 TCATAAAATA ACTTTTTTA TAGGATGATG TGTATAGTGG CCAGAATGGG TTTACAGTAC 900 TTCCAAGCAC TGGCGTTGGT TCAAAATAGC TACTGGGTTC TTGCTCTTTG CTGCATGTTG 960 AGATCAGGAA GCTAGTCTTA TACTTACCCA GTGCATTCTG TATATATGTA AATTTTATTA 1020 ACTTATTAGA CACGTTGTAC ATTAACAGCA TCCTTCACAA ACTTTTATTT TTTTTTAATT 1080 TTTTTATTAA TTGACAAAGA GAACAAAGTA TCTAGGAACA TTTTACAAAT ATTGTCCTAC 1140 TACATTGCAT GTTGTGGTTC TTGTTTGTAT GTTTGTCCTG ATCTTCTACA ATGTATCCCT 1200 AGCCATAAAA CGATTTTGTG AGTGTGTGTG TGTGACTGCA TCCCATTTTA TTCATTATGC 1260 AAACACTTTG CAAATGATTG TGCAGCAATG TAAGTGCTAG CCTGTGGTCA ACAGTGCTGA _ 1320 ATGTAAATCT TGGAGCGGTG ATATCAGCAT GCTTATGGAG GCTCAATAAC CTTGGTCTTG 1380 CCCCTTTAAA TTCTATTTT CTACGGGCAA GTAAATCTAA ACTGGTAAAG TACCTTCTTT 1440 TAAGGAAATG AATCACTGAA TGTTATAATT CCAGTTTCAG GCCACAGACA ATTAATGACA 1500 GCTCAGGGAA TAATACAATT GCCCATGTTT GATGCACCTA ATGTACTGTA TGTATTACAG 1560 1620 AAAAAAAAA AAA 1633

Figure 6

Title: Isolated FGF Receptor Inventors: Marc W. Kirschner

CLP
MQFLRFLAILIFSAKHFIKHCKGETCMGLNCNDPRLLEA
IKSNTINQLLHDTINATHGKSPPKSTKTLPFLGITDSKK
LNRKCCQNGGTCFLGTFCICPKQFTGRHCEHERRPASCS
GVPHGDWIRQGCLLCRCVSGVLHCFKPESEDCDVVHEKN
MRSGVPRMQLSLIIYCFLTANLFYHIVWHLNIGL

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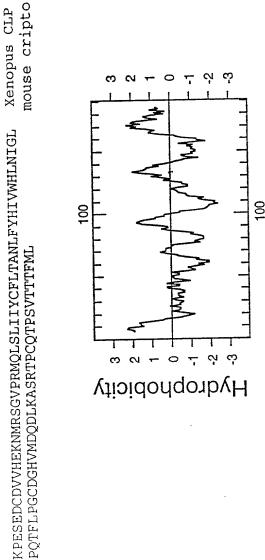
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Isolated FGF Receptor

Marc W. Kirschner

MQFLRFLAILIFSAKHFIKHCKGETCMGLNCNDPRLLEAIKSNTINQLLHDTINATHGKSPP MGYFSSSVVLLVAISSAFEFGPVAGRDLAIRDNSIWDQKEPAVRD





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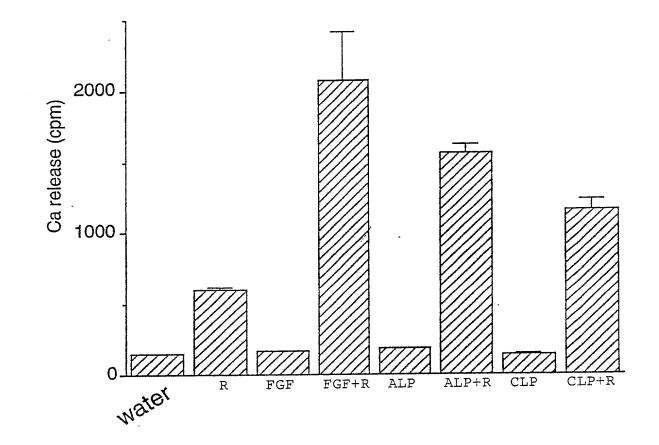


Figure 9

human KaposiFGF XeFGF human FGF6 human XeFGF human human human New New New New New New New

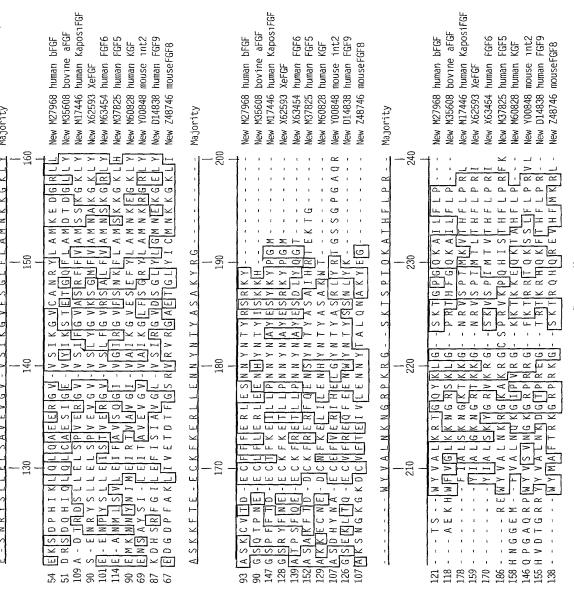
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Isolated FGF Receptor Marc W. Kirschner

Docket No.: Title:

Inventors:

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(CLP) ↓	
MOFLRFLAILIFSAKHFIKHCKGETCMGLNCNDF	PRLLEAI 40
KSNTINQLLHDTINATHGKSPPKSTKTLPFLGI	TDSKKLN 80.
RKCCQNGGTCFLGTFC I CPKQFTGRHCEHERRPA	ASCSGVP 120
HGDWIRQGCLLCRCVSGVLHCFKPESEDCDVVHE	EKNMRSG 160
VPRMQLSLIIYCFLTANLFYHIVWHLNIGL	190
(ALP) ↓	
MLDIMVAVLSSLLTICIILSFSLPSDTONINAFN	1EKHIVK 40
EGAETNCNOT I KDRN I RFKNNCKFRNTF I HDTNO	GKKVKEM 80
CAGIVKSTFVISKELLPLTDCLLMGRTARPPNCA	AYNOTRT 120
TGV IN I TCENNYPVHFAGYKSSFCASYSPCALIV	ITVFLL 160
SQLLI PAMR	169
SULLLEAMIN	103

arrow; predicted cleavage sites N: predicted N-glycosilation sites

Hydrophobic regions at C-terminus are underlined

Figure 11

Title: Inventors:

Isolated FGF Receptor Marc W. Kirschner

FRL-1 MOFLRFLAILIFSAKHFIKHCKGETCMGLNCNDPRLLEA

IKSNTINQLLHDTINATHGKSPPKSTKTLPFLGITDSKK

LNRKCCQNGGTCFLGTFCICPKQFTGRHCEHERRPASCS

GVPHGDWIRQGCLLCRCVSGVLHCFKPESEDCDVVHEKN

MRSGVPRMQLSLIIYCFLTANLFYHIVWHLNIGL

*: amino acid residues highly/conserved among EGF repeats